



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,605	09/05/2006	Kenichi Fukuoka	295982US2PCT	3402
22850 7590 06/27/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER MACCHIAROLO, PETER J				
ART UNIT 2879		PAPER NUMBER		
NOTIFICATION DATE 06/27/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/591,605

Applicant(s)

FUKUOKA ET AL.

Examiner

PETER J. MACCHIAROLO

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/05/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 12/01/2006

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12/01/2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by
Weaver et al. (USPGPUB 20030085652: “Weaver”).**

Regarding claim 1, Weaver discloses at least in fig. 4 an organic electro luminescent device comprising at least: a first light reflecting layer (320b), a first transparent electrode (342), an organic emitting layer (344), a second transparent electrode (348) and a second light reflecting layer (320a) stacked on a substrate (310) in this order; at least one of the first light reflecting layer and the second light reflecting layer being light semi-transmissive.

Regarding claim 4, Weaver discloses at least in paragraph 55 an average thickness of all layers interposed between the first light reflecting layer and the second light reflecting layer is 100 to 1000 nm.

Regarding claim 6, Weaver discloses at least in paragraph 50 the first light reflecting layer (320b corresponding to 120) is provided with a light diffusion part (high-density material 122a-c).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver.

Regarding claim 2, Weaver discloses in at least paragraph 55 that a plurality of wavelengths of light is typically transmitted through the multilayer mirror structure, but is silent to the emission from the organic electro luminescent device having at least 3 peaks in the wavelengths of 400 to 800 nm.

However, this is an obvious configuration to one of ordinary skill in the art, since it is well known that to produce a pure white light, the OLED must emit at least a peak in each of red, green and blue wavelength spectrum (which are all between 400 and 800nm).

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Weaver with the emission from the organic electro luminescent device having at least 3 peaks in the wavelengths of 400 to 800 nm to produce a pure white light emitting device.

Regarding claim 5, Weaver is silent to at least one of the first transparent electrode and the second transparent electrode is formed of an oxide of one kind or two or more kinds of elements selected from the group consisting of In, Sn, Zn, and Cd.

However, the Examiner takes Official Notice that the material ITO (indium-tin oxide) is a well-known transparent electrode material which has proper conductivity and light transmission attributes for OLED display devices.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Weaver with the transparent electrodes being made from ITO to allow for proper conductivity and light transmission attributes for OLED display devices.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver in view of Cok et al. (USPGPUB 20040004988; "Cok").

Regarding claim 3, Weaver is silent to a light transmitting protective layer between the second electrode and the second light reflecting layer.

However, Cok teaches in at least paragraph 44 that this configuration can protect the transparent electrode.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Weaver with a light transmitting protective layer between the second electrode and the second light reflecting layer to protect the transparent electrode.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver in view of Applicant cited Kimura (JP 2003272855; "Kimura"). USPGPUB 20060124920 to Kimura is used herein for translation and reference.

Regarding claims 7 and 8, Weaver is silent to the OLED having a color conversion member or a color filter.

However, as taught by Kimura in at least paragraph 41, both these configurations allows for increased color purity and luminescence.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Weaver with a color conversion member or a color filter to increase color purity and luminescence.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

/Peter Macchiarolo/
Primary Examiner, Art Unit 2879
(571) 272-2375